Nugget Test Pilot

By Lt. Matt Stevenson

I had been in the squadron only a few months when I was scheduled for a defensive, 1 v 1 syllabus hop on a glorious Friday afternoon. I was eager to demonstrate to one of our seasoned hinges my basic-fighter-maneuver (BFM) skills I had picked up in the FRS.

The brief was long, covering the maneuvers and tactics a defensive aircraft should execute. Training rules were covered in detail, including departures and out-of-control flight (OCF) procedures. We walked to the jets, launched into the whiskey areas off the East Coast, and began our engagements.

We pressed on through the hop and finally arrived at the last set: a 3,000-foot defensive start for me. I began the fight at 18,000 feet and 325 knots, with my instructor camped out 40 degrees off my tail one-half mile away. At the "fight's on" call, I immediately broke left to defeat the simulated initial shot. As the airspeed bled down, the offensive fighter closed in, and I began my "ditch" maneuver. In a heartbeat, my day went from good to bad.

My left full rudder and left full-stick deflection put me in AOA tone, but I figured that feedback to be standard for the maneuver. I was in a 90-degree-AOB left turn and 40 degrees nose low when the aircraft suddenly yawed to 75 degrees nose low. It then reversed and departed controlled flight in an adverse yaw to the right.

I quickly called, "Knock it off, out of control."

My lead said, "Watch the rudders."

My nose was buried 75 degrees nose low, and my airspeed indicated a paltry 74 knots. The plane then snapped back to the left again. My airspeed showed 48 knots (the lowest airspeed a Hornet HUD can indicate), while my nose actually was above the horizon.

My training kicked in, and I went through the NATOPS OCF procedures, which calls for releasing the controls. I was going along for Mr. Toad's Wild Ride.

I had been through many OCF flights in various aircraft, including spin training in the T-34 and T-2. I also had been through the recently reinstated OCF-flight syllabus in the FRS. So far, my airplane was behaving exactly like an OCF flight I had had in VFA-106. That behavior all changed in the next instant, when I went from a departed Hornet to a spinning Hornet—something that almost never happens.

Sometimes, when you are out of control in the Hornet, you get oscillating-spin arrows while the computer tries to decide whether you are in a spin. These arrows were solid, and I was in an upright spin. My AOB was plus-or-minus 30 degrees, and I was spinning to the left at 60 degrees per second. Those statistics aside, my primary concern was falling out of the sky at 28,000 feet per minute. It took me a moment to realize what I was seeing; a spin is hard to duplicate, even in the simulator. The various spin flights I had had were now paying off as I snapped to reality and went into my spin-recovery procedures.

Concern rose in my mind that I was about to become a Martin-Baker-seat owner, as I whizzed through 12,000 feet. The skipper would kill me if I splashed this jet. My lead read altitudes to me as he followed me down. This information increased my situational awareness and would help if and when the time came to pull the ejection handle.

Finally, the airplane snapped nose low and accelerated toward a recovery airspeed of 180 knots. I told lead I was recovering, and he replied, "Take it easy on the pull." He didn't want to see me depart again, trying to recover; believe me, neither did I.

I bottomed out at 8,000 feet, then, as I climbed, it hit me: I almost had become a statistic. Lead quipped we had done enough for today, and he got no argument from me. We returned to base without further incident.

Ultimately, I should have been more conscious of the steps for a "ditching" maneuver. I had failed to completely unload the G before trying the maneuver. To me, relaxing the G and unloading the jet had become synonymous—they are not. Because I knew my NATOPS immediate-action items, I was able to call the skipper and tell him I had spun a jet but hadn't jettisoned it.

As I look back on my wild ride, several lessons come to mind. Know your procedures cold, lest small, unsafe habits creep in. Remember, in an instant, you can be operating only on stem power.

Never gloss over training rules. We didn't, and they still were fresh in my mind.

Crew-resource management (CRM) was a big factor in this incident. Lead provided gentle reminders but stayed out of my cockpit while I fought the airplane. By reading off altitudes, he kept my ejection envelope SA higher, in case my instruments lagged, or I was disoriented.

If you think it can't happen to you because you can't duplicate the scenario in the simulator, think again. I can't overemphasize the value of the spin training in the training command and, even more importantly, in the FRS.

Lt. Stevenson flies with VFA-105.

Photo composite

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